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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,533

Applicant(s)

VAN GESTEL ET AL.

Examiner

TAT CHI CHIO

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-893)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 22-38 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 22-38 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3-9, 11-14, and 16-20 of U.S.

Patent No. US 6724978 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because

Consider claim 22, claim 3 of US 6724978 recites the recording arrangement as claimed in claim 1, wherein: the channel encoding means stores information included in

x transport packets of the MPEG information signal in the second block sections of a first group of y first signal blocks of said signal blocks of the channel signal so as to enable a normal play mode using video information stored in said first group of y first signal blocks during a normal play reproduction mode; and the channel encoding means further retrieves a trick mode video signal from the MPEG information signal and stores said trick mode video signal in second block sections of a second group of z second signal blocks of said signal blocks of the channel signal so as to enable a trick play mode using the video information stored in said second signal blocks, wherein the second block sections of at least one signal block in each first and second group of first and second signal blocks, respectively, comprise a third block section for storing identification information indicating whether the group comprises the first signal blocks or second signal blocks, in which z is an integer where $z > 1$. It is noted that the recording arrangement of claim 22 of this application is broader than the recording arrangement of claim 3 of US Patent No. 6724978 B2 and therefore obviousness-type double patenting rejection is applied.

Consider claim 23, claim 6 of US 6724978 recites the recording arrangement as claimed in claim 5, wherein the second block sections of a group of y signal blocks each comprise a third block section for storing sequence number information relating to a transport packet sequence number corresponding to the transport packet of which information is stored in said signal block. It is noted that the recording arrangement of claim 23 of this application is broader than that of claim 6 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 24, claim 5 of US 6724978 recites the recording arrangement as claimed in claim 3, wherein the second block sections of all signal blocks in each first and second group of first and second signal blocks respectively comprise a third block section for storing identification information indicating whether the group comprises first signal blocks or second signal blocks. It is noted that the recording arrangement of claim 24 of this application is broader than that of claim 5 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 25, claim 6 of US 6724978 recites the recording arrangement as claimed in claim 5, wherein the second block sections of a group of y signal blocks each comprise a third block section for storing sequence number information relating to a transport packet sequence number corresponding to the transport packet of which information is stored in said signal block. It is noted that the recording arrangement of claim 25 of this application is broader than that of claim 6 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 26, claim 7 of US 6724978 recites the recording arrangement as claimed in claim 1, wherein the recording arrangement further comprises: detection means for detecting the moment of receipt of the transport packets, and for generating timing information for each transport packet received, and wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprise the start portion of a transport packet comprise a third block section for storing the timing information for said transport packet having its start portion stored in the second block section of the signal block. It is noted that the recording arrangement of claim 26 of this

application is broader than that of claim 7 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 27, claim 8 of US 6724978 recites The recording arrangement as claimed in claim 7, wherein the second block sections of a group of y signal blocks each comprise a third block section for storing the timing information corresponding to the transport packet which has information stored in the second block section of said signal block. It is noted that the recording arrangement of claim 27 of this application is broader than that of claim 8 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 28, claim 9 of US 6724978 recites the recording arrangement as claimed in claim 1, wherein $y > x$. It is noted that the recording arrangement of claim 28 of this application is broader than that of claim 9 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 29, claim 12 of US 6724978 recites the record carrier as claimed in claim 10, wherein the channel encoded information signal recorded in a track comprises a first group of y first signal blocks so as to enable a normal play mode using the video information stored in said first group of y first signal blocks during a normal play reproduction mode, and comprises a second group of z second signal blocks in which a trick mode video signal is stored so as to enable a trick play mode using the video information stored in said second group of z second signal blocks, wherein indication information indicating whether a group comprises first signal blocks or second

signal blocks is stored in the third block sections of at least one signal block of the first and second groups. It is noted that the record carrier of claim 29 of this application is broader than that of claim 12 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 30, claim 11 of US 6724978 recites the record carrier as claimed in claim 10, wherein sequence number information relating to the sequence number of the signal blocks is stored in the third block sections of the signal blocks. It is noted that the record carrier of claim 30 of this application is broader than that of claim 11 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 31, claim 13 of US 6724978 recites the record carrier as claimed in claim 10, wherein the third block section of the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet comprise information relating to a transport packet sequence number corresponding to the transport packet having its start portion stored in the second block section of the signal block. It is noted that the record carrier of claim 31 of this application is broader than that of claim 13 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 32, claim 14 of US 6724978 recites the record carrier as claimed in claim 10, wherein the third block section of the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet comprise timing information for said transport packet having its start portion

stored in the second block section of the signal block. It is noted that the record carrier of claim 32 of this application is broader than that of claim 14 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 33, claim 17 of US 6724978 recites the reproducing arrangement as claimed in claim 15, wherein information contained in x transport packets of the MPEG information signal is stored in the second block sections of a first group of y first signal blocks of the channel signal enabling a normal play mode using the video information stored in said first group of y first signal blocks during a normal play reproduction mode, a trick mode video signal being stored in a second group of z second block sections of second signal blocks of said signal blocks of the channel signal enabling a trick play mode using the video information stored in said second group of second signal blocks, wherein the second block sections of at least one first and second signal block in the first and second group each comprise a third block section for storing indication information indicating whether the group comprises first signal blocks or second signal blocks, wherein the first retrieving means retrieves, in said normal play mode, the video information of the x transport packets of the MPEG information signal from the first group of y first signal blocks, and retrieves, in said trick play mode, the trick mode video signal from the second group of z second signal blocks, in response to a first or a second control signal, and wherein the second retrieving means retrieves the indication information indicating whether the group comprises first signal blocks or second signal blocks from the third block sections of the at least one signal block in the first and second groups, respectively, the second retrieving means

generating said first and second control signals in response thereto. It is noted that the reproducing arrangement of claim 33 of this application is broader than that of claim 17 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 34, claim 16 of US 6724978 recites the reproducing arrangement as claimed in claim 15, wherein the second block sections of the signal blocks comprise a third block section for storing sequence number information relating to the sequence number of the signal block, and wherein the second retrieving means retrieves the sequence number information from the third block sections of the signal blocks in said tracks. It is noted that the reproducing arrangement of claim 34 of this application is broader than that of claim 16 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 35, claim 18 of US 6724978 recites the reproducing arrangement as claimed in claim 15, wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet, comprise a third block section for storing sequence number information relating to a transport packet sequence number corresponding to the transport packet having its start portion stored in the second block section of the signal block, and wherein the second retrieving means retrieves the sequence number information relating to the transport packet sequence number from a third block section of a signal block in the group of y signal blocks. It is noted that the reproducing arrangement of claim 35 of this application is broader than that of claim 18 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 36, claim 19 of US 6724978 recites the reproducing arrangement as claimed in claim 15, wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet, comprise a third block section for storing timing information for said transport packet having its start portion stored in the second block section of the signal block, and wherein the second retrieving means retrieves the timing information from a third block section of a signal block in the group of y signal blocks. It is noted that the reproducing arrangement of claim 36 of this application is broader than that of claim 19 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 37, claim 20 of US 6724978 recites the reproducing arrangement as claimed in claim 15, wherein $y > x$. It is noted that the reproducing arrangement of claim 37 of this application is broader than that of claim 20 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

Consider claim 38, claim 3 of US 6724978 recites the recording arrangement as claimed in claim 1, wherein: the channel encoding means stores information included in x transport packets of the MPEG information signal in the second block sections of a first group of y first signal blocks of said signal blocks of the channel signal so as to enable a normal play mode using video information stored in said first group of y first signal blocks during a normal play reproduction mode; and the channel encoding means further retrieves a trick mode video signal from the MPEG information signal and stores said trick mode video signal in second block sections of a second group of z second signal blocks of said signal blocks of the channel signal so as to enable a trick play mode

using the video information stored in said second signal blocks, wherein the second block sections of at least one signal block in each first and second group of first and second signal blocks, respectively, comprise a third block section for storing identification information indicating whether the group comprises the first signal blocks or second signal blocks, in which z is an integer where $z > 1$. The method of claim 38 of this application can be used to operate the recording arrangement of claim 3 of US 6724978 and therefore obviousness-type double patenting rejection is applied.

4. Claims 22-38 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. US 6490406 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because

Consider claims 22-28 and 38, claim 2 of US 6724978 recites the a reproducing arrangement for reproducing a digital information signal, the digital information signal being an MPEG information signal with an MPEG format of multiple transport packets, said reproducing arrangement comprising: means for reading a channel signal from a track of a record carrier, the channel signal including multiple signal blocks having first block sections with a synchronizing signal and second block sections of multiple channel bytes, the second block sections containing third block sections that include information to control the reproduction of the MPEG information signal; means for channel decoding the channel signal into the digital information signal; and an output terminal for supplying the digital information signal, wherein the channel decoding means comprises: formatting means for providing information from the second block

sections of a group of y signal blocks of the channel signal into x transport packets of the MPEG information signal, where x and y are integers such that $x \geq y$; and control means for controlling the reproduction of the MPEG information signal depending on the control information retrieved from the third block sections, wherein: $y > x$; third block sections of the groups of signal blocks, includes information identifying a signal block as the first signal block of the respective group; the control means recognizes the first signal block of a group of signal blocks and for controlling the reproduction of the MPEG information signal depending on the information identifying the first signal block of a group of signal blocks; the third block sections of the group of signal blocks include information related to the sequence numbers of the signal blocks in the group; the control means controls the reproduction of the MPEG information signal depending on the sequence number information, determines if a signal block has been missed, depending on the sequence numbers of the signal blocks, and performs error correction or error concealment depending on the determination; the control means recognizes that two signal blocks have the same sequence number and corrects errors in the channel signal depending on both of the two signal blocks; the control means de-shuffles the order of the signal blocks depending on the sequence numbers of the signal blocks indicating that the order of the signal blocks is shuffled; the group of y signal blocks contain normal play information in the second block sections; the formatting means provides normal play video information from the group of y signal blocks into x transport packets to enable normal play using the video information stored in the group of y signal blocks during a normal play reproduction mode; a group of z

signal blocks contain trick play information in the second block sections; the formatting means provides trick play video information from second block sections of a group of z signal blocks into the x transport packets of the MPEG information signal, where z is an integer such that $z \geq 1$, enabling trick play using the video information stored in the group of z signal blocks during a trick play reproduction mode; the third block sections include play mode information indicating whether the group includes normal play signal blocks or trick play signal blocks; the control means produces either a normal play MPEG information signal or a trick play MPEG information signal depending on the play mode information; the third block sections of a group of signal blocks, include packet skip information for determining whether the information for any MPEG transport packets are missing; the control means produces the MPEG information signal depending on the packet skip information of the transport packets, the packet skip information of a group of signal blocks including information relating to a sequence number of the included transport packet, and including information relating to the included timing of the included transport packet; and the control means determines which transport packets have been skipped depending on the packet skip information, and inserts dummy transport packets into the MPEG information signal depending on the determination of which transport packets are missing, thereby regenerating the MPEG information signal with the same number and timing of packets as in an original MPEG information signal. However, claim 2 of US 6490406 does not explicitly teach a recording arrangement. The examiner takes official notice that recording information reproduced from a recording medium is well-known in the art. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to record the reproduced information for user's convenience and therefore, the obviousness-type double patenting rejection is applied.

consider claims 29-32, claim 2 of US 6724978 recites a reproducing arrangement for reproducing a digital information signal, the digital information signal being an MPEG information signal with an MPEG format of multiple transport packets, said reproducing arrangement comprising: means for reading a channel signal from a track of a record carrier, the channel signal including multiple signal blocks having first block sections with a synchronizing signal and second block sections of multiple channel bytes, the second block sections containing third block sections that include information to control the reproduction of the MPEG information signal; means for channel decoding the channel signal into the digital information signal; and an output terminal for supplying the digital information signal, wherein the channel decoding means comprises: formatting means for providing information from the second block sections of a group of y signal blocks of the channel signal into x transport packets of the MPEG information signal, where x and y are integers such that $x \geq y$ and $y > 1$; and control means for controlling the reproduction of the MPEG information signal depending on the control information retrieved from the third block sections, wherein: $y > x$; third block sections of the groups of signal blocks, includes information identifying a signal block as the first signal block of the respective group; the control means recognizes the first signal block of a group of signal blocks and for controlling the reproduction of the MPEG information signal depending on the information identifying the first signal block of a group of signal

blocks; the third block sections of the group of signal blocks include information related to the sequence numbers of the signal blocks in the group; the control means controls the reproduction of the MPEG information signal depending on the sequence number information, determines if a signal block has been missed, depending on the sequence numbers of the signal blocks, and performs error correction or error concealment depending on the determination; the control means recognizes that two signal blocks have the same sequence number and corrects errors in the channel signal depending on both of the two signal blocks; the control means de-shuffles the order of the signal blocks depending on the sequence numbers of the signal blocks indicating that the order of the signal blocks is shuffled; the group of y signal blocks contain normal play information in the second block sections; the formatting means provides normal play video information from the group of y signal blocks into x transport packets to enable normal play using the video information stored in the group of y signal blocks during a normal play reproduction mode; a group of z signal blocks contain trick play information in the second block sections; the formatting means provides trick play video information from second block sections of a group of z signal blocks into the x transport packets of the MPEG information signal, where z is an integer such that $z \geq \text{toreq}.1$, enabling trick play using the video information stored in the group of z signal blocks during a trick play reproduction mode; the third block sections include play mode information indicating whether the group includes normal play signal blocks or trick play signal blocks; the control means produces either a normal play MPEG information signal or a trick play MPEG information signal depending on the play mode information; the third block

sections of a group of signal blocks, include packet skip information for determining whether the information for any MPEG transport packets are missing; the control means produces the MPEG information signal depending on the packet skip information of the transport packets, the packet skip information of a group of signal blocks including information relating to a sequence number of the included transport packet, and including information relating to the included timing of the included transport packet; and the control means determines which transport packets have been skipped depending on the packet skip information, and inserts dummy transport packets into the MPEG information signal depending on the determination of which transport packets are missing, thereby regenerating the MPEG information signal with the same number and timing of packets as in an original MPEG information signal. The reproducing arrangement of claim 2 of US 6490406 can be used to reproduce the information recorded on the record carrier of this application and therefore the obviousness-type double patenting rejection is applied.

Consider claims 33-37, claim 2 of US 6724978 recites a reproducing arrangement for reproducing a digital information signal, the digital information signal being an MPEG information signal with an MPEG format of multiple transport packets, said reproducing arrangement comprising: means for reading a channel signal from a track of a record carrier, the channel signal including multiple signal blocks having first block sections with a synchronizing signal and second block sections of multiple channel bytes, the second block sections containing third block sections that include information to control the reproduction of the MPEG information signal; means for

channel decoding the channel signal into the digital information signal; and an output terminal for supplying the digital information signal, wherein the channel decoding means comprises: formatting means for providing information from the second block sections of a group of y signal blocks of the channel signal into x transport packets of the MPEG information signal, where x and y are integers such that $x \geq 1$ and $y > 1$; and control means for controlling the reproduction of the MPEG information signal depending on the control information retrieved from the third block sections, wherein: $y > x$; third block sections of the groups of signal blocks, includes information identifying a signal block as the first signal block of the respective group; the control means recognizes the first signal block of a group of signal blocks and for controlling the reproduction of the MPEG information signal depending on the information identifying the first signal block of a group of signal blocks; the third block sections of the group of signal blocks include information related to the sequence numbers of the signal blocks in the group; the control means controls the reproduction of the MPEG information signal depending on the sequence number information, determines if a signal block has been missed, depending on the sequence numbers of the signal blocks, and performs error correction or error concealment depending on the determination; the control means recognizes that two signal blocks have the same sequence number and corrects errors in the channel signal depending on both of the two signal blocks; the control means de-shuffles the order of the signal blocks depending on the sequence numbers of the signal blocks indicating that the order of the signal blocks is shuffled; the group of y signal blocks contain normal play information in the second block sections; the

formatting means provides normal play video information from the group of y signal blocks into x transport packets to enable normal play using the video information stored in the group of y signal blocks during a normal play reproduction mode; a group of z signal blocks contain trick play information in the second block sections; the formatting means provides trick play video information from second block sections of a group of z signal blocks into the x transport packets of the MPEG information signal, where z is an integer such that $z \geq 1$, enabling trick play using the video information stored in the group of z signal blocks during a trick play reproduction mode; the third block sections include play mode information indicating whether the group includes normal play signal blocks or trick play signal blocks; the control means produces either a normal play MPEG information signal or a trick play MPEG information signal depending on the play mode information; the third block sections of a group of signal blocks, include packet skip information for determining whether the information for any MPEG transport packets are missing; the control means produces the MPEG information signal depending on the packet skip information of the transport packets, the packet skip information of a group of signal blocks including information relating to a sequence number of the included transport packet, and including information relating to the included timing of the included transport packet; and the control means determines which transport packets have been skipped depending on the packet skip information, and inserts dummy transport packets into the MPEG information signal depending on the determination of which transport packets are missing, thereby regenerating the MPEG information signal with the same number and timing of packets as in an original

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MPEG information signal. It is noted that the reproducing arrangement of claims 33-37 of this application is broader than that of claim 2 of US 6490406 and therefore obviousness-type double patenting rejection is applied.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works, and a compilation or mere arrangement of data.

Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 29-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory matter as follows. Claims 29-32 define a record carrier embodying non-functional descriptive material. The claim does not define a computer-readable medium or memory and is thus non-statutory for that reason. That is, the scope of the presently claimed a record carrier can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

2. Claims 29-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter and should be rejected under 35 U.S.C. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping or sequence of musical notes read from memory and thereafter causes another defined series of notes to be played, requires a functional interrelationship among that data and the computing processes performed when utilizing that data. As such, a claim to that computer is statutory subject matter because it implements a statutory process.

Claims 29-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 29-32 recite a record carrier which does not impart functionality to a computer or computing device, and is thus

considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

Claim Rejections - 35 USC § 112

1. Claim 22 and 29 recites the limitation "the form". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 22-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Lane et al. (5,377,051).

Consider claims 22, 29, and 38, Lane et al. teach a recording arrangement for recording an information signal in tracks on a record carrier, the recording arrangement comprising: an input terminal (102 of Fig. 8(a)) for receiving the information signal; channel encoding means (102 of Fig. 8(a) and Fig. 10(a)) for channel encoding the information signal into a channel signal, the channel signal including subsequent signal

blocks having a predetermined fixed length, each signal block comprising a first block section having a synchronization signal, and a second block section having a number of channel bytes; and writing means (Fig. 10(a)) for writing the channel signal in the tracks on the record carrier, wherein the information signal is in the form of an MPEG information signal in accordance with an MPEG format, the MPEG information signal comprising subsequent transport packages having a predetermined fixed length, and wherein: the channel encoding means stores information included in x transport packets of the MPEG information signal in the second block sections of a first group of y first signal blocks of said signal blocks of the channel signal so as to enable a normal play mode using video information stored in said first group of y first signal blocks during a normal play reproduction mode (Fig. 8(b) to Fig. 10(a)); and the channel encoding means further receives a trick mode video signal and stores said trick mode video signal in second block sections of a second group of z second signal blocks of said signal blocks of the channel signal so as to enable a trick play mode using the video information stored in said second signal blocks, wherein the second block sections of at least one signal block in each first and second group of first and second signal blocks, respectively, comprise a third block section for storing identification information indicating whether the group comprises the first signal blocks or second signal blocks, and wherein x , y and z are integer constants in which $x \geq 1$, $y > 1$ and $z > 1$ (Fig. 8(b) to Fig. 10(a) and col. 22, line 58-col. 23, line 12).

Consider claims 23 and 30, Lane et al. teach the recording arrangement, wherein the second block sections of the signal blocks comprise a third block section for

storing sequence number information relating to a sequence number of the signal block (Fig. 8(b) and col. 22, line 58-col. 23, lines 12).

Consider claim 24, Lane et al. teach the recording arrangement, wherein the second block sections of all signal blocks in each first and second group of first and second signal blocks respectively comprise a third block section for storing identification information indicating whether the group comprises first signal blocks or second signal blocks (Fig. 8(b) and col. 22, line 58-col. 23, line 12).

Consider claim 25, Lane et al. teach the recording arrangement, wherein the second block sections of a group of y signal blocks each comprise a third block section for storing sequence number information relating to a transport packet sequence number corresponding to the transport packet of which information is stored in said signal block (Fig. 8(b) and col. 22, line 58-col. 23, line 12).

Consider claims 26, 31, and 32, Lane et al. teach the recording arrangement, wherein the recording arrangement further comprises: detection means for detecting the moment of receipt of the transport packets, and for generating timing information for each transport packet received, and wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprise the start portion of a transport packet comprise a third block section for storing the timing information for said transport packet having its start portion stored in the second block section of the signal block (Fig. 8(b) to Fig. 10(a) and col. 22, line 58-col. 23, line 12).

Consider claim 27, Lane et al. teach the recording arrangement, wherein the second block sections of a group of y signal blocks each comprise a third block section

for storing the timing information corresponding to the transport packet which has information stored in the second block section of said signal block (Fig. 8(b) to Fig. 10(a)).

Consider claim 28, Lane et al. teach the recording arrangement, wherein $y > x$ (Fig. 12(a) and col. 40, lines 11-68).

Consider claim 33, Lane et al. teach a reproducing arrangement for reproducing an information signal that has been recorded in the form of a channel signal in tracks on a record carrier, the reproducing arrangement comprising: reading means (440 of Fig. 11) for reading the channel signal from a track on the record carrier, the channel signal comprising subsequent signal blocks having a predetermined fixed length, each signal block comprising a first block section having a synchronization signal and a second block section having a number of channel bytes; channel decoding means (Fig. 8(b) to Fig. 11) for channel decoding the channel signal into the information signal; and an output terminal (412 of Fig. 11) for applying the information signal, wherein the reproducing arrangement is adapted to reproduce an MPEG information signal in accordance with an MPEG format from the record carrier, the MPEG information signal comprising subsequent transport packets having a predetermined fixed length, wherein information contained in x transport packets of the MPEG information signal is stored in the second block sections of a first group of y first signal blocks of the channel signal enabling a normal play mode using the video information stored in said first group of y first signal blocks during a normal play reproduction mode, a trick mode video signal being stored in a second group of z second block sections of second signal blocks of

said signal blocks of the channel signal enabling a trick play mode using the video information stored in said second group of second signal blocks where x , y and z are integer constants in which $x \geq 1$, $y > 1$ and $z > 1$, wherein the second block sections of at least one first and second signal block in the first and second group each comprise a third block section for storing indication information indicating whether the group comprises first signal blocks or second signal blocks, and wherein the reproducing arrangement further comprises: first retrieving means for retrieving in said normal play mode, the video information of the x transport packets of the MPEG information signal from the first group of y first signal blocks, and for retrieving, in said trick play mode, the trick mode video signal from the second group of z second signal blocks, in response to a first or a second control signal, and second retrieving means for retrieving the indication information indicating whether the group comprises first signal blocks or second signal blocks from the third block sections of the at least one signal block in the first and second groups, respectively, the second retrieving means generating said first and second control signals in response thereto (Fig. 8(b) to Fig. 11).

Consider claim 34, Lane et al. teach the reproducing arrangement, wherein the second block sections of the signal blocks comprise a third block section for storing sequence number information relating to the sequence number of the signal block, and wherein the second retrieving means retrieves the sequence number information from the third block sections of the signal blocks in said tracks (Fig. 8(b) and col. 22, line 58-col. 23, line 12).

Consider claim 35, Lane et al. teach the reproducing arrangement, wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet, comprise a third block section for storing sequence number information relating to a transport packet sequence number corresponding to the transport packet having its start portion stored in the second block section of the signal block (Fig. 8(b) to Fig. 10(a) and col. 22, line 58-col. 23, line 12), and wherein the second retrieving means retrieves the sequence number information relating to the transport packet sequence number from a third block section of a signal block in the group of y signal blocks (Fig. 8(b) and col. 22, line 58-col. 23, line 12).

Consider claim 36, Lane et al. teach the reproducing arrangement, wherein the second block sections of at least those signal blocks in a group of y signal blocks that comprises the start portion of a transport packet, comprise a third block section for storing timing information for said transport packet having its start portion stored in the second block section of the signal block, and wherein the second retrieving means retrieves the timing information from a third block section of a signal block in the group of y signal blocks (Fig. 8(b) to Fig. 10(a) and col. 22, line 58-col. 23, line 12).

Consider claim 37, Lane et al. teach the reproducing arrangement, wherein $y > x$ (Fig. 12(a) and col. 40, lines 11-68).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAT CHI CHIO whose telephone number is (571)272-

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9563. The examiner can normally be reached on Monday - Thursday 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571)-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. C. C./
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621